WHAT IS CLAIMED IS:

1. A method of manufacturing a nonvolatile semiconductor memory device comprising the steps of:

forming a plurality of stacked structures on a main surface of a semiconductor substrate, each of said stacked structures including a side surface and having a plurality of floating gate electrodes and a control gate electrode formed on a plurality of floating gate electrodes to extend in a prescribed direction;

forming an interlayer insulating film covering said stacked structure and having a top surface approximately parallel to said main surface;

forming a mask layer on the top surface of said interlayer insulating film;

forming an opening in the interlayer insulating film to be positioned between said stacked structures adjacent to each other by selectively etching said interlayer insulating film using said mask layer as a mask; and

forming a source region extending along a plurality of floating gate electrodes by implanting impurity ions from said opening to said main surface.

2. The method of manufacturing a nonvolatile semiconductor memory device according to claim 1, further comprising the step of metallizing a part of said source region.

3. The method of manufacturing a nonvolatile semiconductor memory device according to claim 1, further comprising the steps of: forming an insulating film covering the side surfaces of said plurality of stacked structures and the main surface of said semiconductor substrate after forming said stacked structure and before forming said interlayer insulating film; and etching back said insulating film and leaving said insulating film covering the side surface of said stacked structure, to form a sidewall insulating film.

4. A method of manufacturing a nonvolatile semiconductor memory device comprising the steps of:

forming a plurality of stacked structures on a main surface of a semiconductor substrate, each of said stacked structures including a side surface and having a plurality of floating gate electrodes and a control gate electrode formed on a plurality of floating gate electrodes to extend in a prescribed direction;

forming an insulating film covering said stacked structure;

forming a sidewall insulating film covering said side surfaces of a plurality of stacked structures by etching back said insulating film; and

forming a source region extending along said plurality of floating gate electrodes, between said plurality of stacked structures in said semiconductor substrate, by implanting an impurity in said semiconductor substrate using said sidewall insulating film as a mask.

5. The method of manufacturing a nonvolatile semiconductor memory device according to claim 4, further comprising the step of forming a plurality of isolation insulating films in said semiconductor substrate, wherein a part of said source region is formed between said plurality of isolation insulating films.

6. The method of manufacturing a nonvolatile semiconductor memory device according to claim 4, wherein said isolation insulating film includes an oxide film and said sidewall insulating film includes a nitride film.

7. The method of manufacturing a nonvolatile semiconductor memory device according to claim 4, further comprising the step of metallizing a part of said source region using said sidewall insulating film as a mask.